

WHAT IS CLAIMED IS:

1. In a power detector for a radio frequency wireless communications transmitter with a controllable transmitted power level in which a sampled signal is provided via a plurality of matched cascaded elements to a plurality of diode detectors, the output signals from which are summed to provide a control signal for the transmitted power level, the improvement wherein the cascaded elements are passive.
2. The power detector of Claim 1 wherein said cascaded elements are attenuators.
3. The power detector of Claim 2 including an amplifier upstream of said cascaded attenuators.
4. A power detector for controlling the transmit power level of a communications device comprising:
 - plural cascaded attenuators for receiving a signal representative of the transmit power level of a communication device and for providing plural attenuator output signals;
 - plural diode detectors each receiving one of the plural attenuator output signals to thereby providing plural detected signals;
 - a summer responsive to the plural detected signals for producing a control signal having a voltage proportional to the power transmit power level of the communications device; and.

a control unit for adjusting the transmit power level responsively to the control signal.

5. The power detector of Claim 4 wherein said plural attenuators comprise a printed thin film successive pad cascade.

6. The power detector of Claim 4 wherein said plural attenuators each have substantially the same ratio-metric properties.

7. The power detector of Claim 4 further comprising plural buffers connected one each between one of said plural detectors and said summer to thereby increase the d.c. input impedance and improve the sensitivity of the power detector.

8. The power detector of Claim 4 further comprising plural high gain operational amplifiers connected one each between each of said buffers and said summer.

9. The power detector of Claim 8 wherein said plural operational amplifiers include portions of a common monolithic substrate.

10. The power detector of Claim 4 further comprising an amplifier for the signal representative of the transmit power level upstream of said plural attenuators.

11. A power detector for controlling the transmit power level of a communications device comprising:

means for providing a power level signal representative of the transmit power level of the communication device;

passive means for dividing the power level signal into plural power level signals;

means for detecting a characteristic of each of the plural power level signals to thereby provide plural detected signals; and

means for summing the plural detected signals to thereby provide a control signal.

12. A power level control circuit for a communications device comprising:

a communications device having a transmitted power level control;

a detector for providing a power level signal representative of the transmit power level of said communication device;

a passive signal divider for dividing the power level signal into plural power level signals;

a unidirectional circuit for detecting a characteristic of each of the plural power level signals to thereby provide plural detected signals;

an adder for summing the plural detected signals to thereby provide a control signal to said power level control.

13. In a method of detecting the transmit power level of a communication device wherein a signal related to the signal transmitted by the communication device is divided by a plurality of cascaded elements into plural components, and wherein a characteristic of the components is detected and summed to provide a signal related to the power level of the communications device, the improvement wherein the division is accomplished using only passive circuit elements.

14. A method of controlling the transmit power level of a communication device comprising the steps of :

- a. providing a power level signal representative of the power level of the signal transmitted by the communication device;
- b. attenuating the power level signal with a successive cascade of attenuators to thereby provide a plurality of attenuator signals;
- c. detecting a characteristic of each of the plurality of attenuator signals to thereby provide plural detector signals;
- e. summing the detector signals to provide a control signal; and
- f. controlling the transmit power level of the communications device responsively to the control signal.

15. The method of Claim 13 further comprising the step of amplifying the power level signal prior to dividing the power level signal.

16. The method of Claim 13 further comprising the step of amplifying each of the detector signals prior to summing.

17. In a method of controlling the power level of a radio frequency transmitter wherein the level of power is detected by sampling the transmitted signal, the sampled signal is divided, a characteristic of each of the divided signals is detected by a unidirectional device, and the detected signals are summed to provide a control signal, the improvement wherein the sampled signal is divided prior to detection without using active circuit elements.